

International Conference

Sustainability in the Water-Energy-Food Nexus

19-20 May 2014 in Bonn, Germany



Conference Report

Main Issues Discussed

at the International Conference

Sustainability in the Water-Energy-Food Nexus

Summary



Over 250 participants of the International Conference on the Sustainability of the Water-Energy-Food Nexus, meeting on 19/20 May 2014 in Bonn, could choose from 23 parallel sessions and attended five Plenary Sessions. These covered a broad range of topics from the very notion of the nexus, to on-the-ground issues such as energy and water subsidies in the Middle East, biofuels production in Brazil, and groundwater depletion in India.

In a welcome note, Anik Bhaduri, GWSP Executive Officer of the Global Water System Project (GWSP) framed the conference as an international consultation process for a “research-for-action” initiative, with the goal of informing, influencing and catalysing action from the local level, to the global Sustainable Development Goals.

So what does it take to catalyse action?

Imme Scholz, Deputy Director of the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), noted that policy coordination across sectors and levels doesn't come naturally, but if it is seen as really adding value, it will be more welcome. It also helps to have champions for a nexus approach, Scholz said – “courageous” people willing to lead the way.

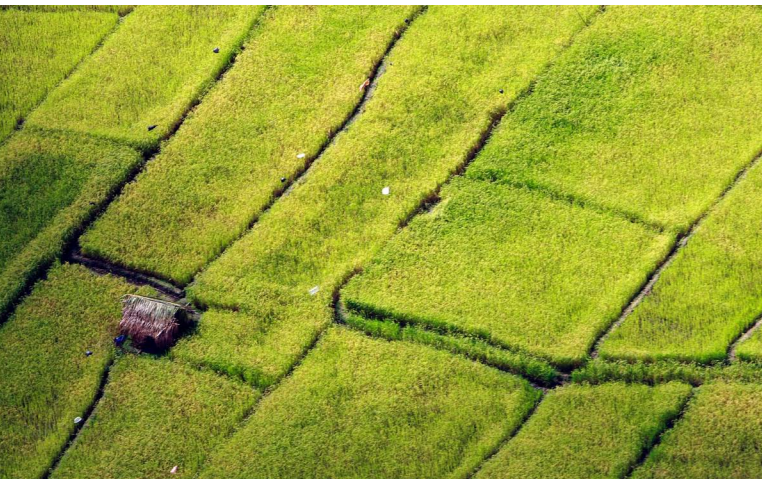
One of the parallel sessions, was on hydropower in shared river basins and offered several examples of a particularly substantial coordination challenge: governance of trans-

boundary river basins, including the Mekong in Southeast Asia, the Euphrates-Tigris in Turkey, Syria, Iraq, Iran and Kuwait, and the Çoruh in Turkey and Georgia. Hydropower development can be transformative, speakers noted, providing energy not only for domestic development but sometimes also for export. Dams can support irrigation for agricultural development. However, if resource use is not carefully coordinated, downstream users and environmental systems can suffer. Thus, speakers argued, good trans-boundary governance should be based on transparent information-sharing and negotiations, and be highly participatory.

The focus of a session on implementing the nexus in the Middle East and North Africa (MENA) region focused on identifying entry points for bringing nexus analyses into policy debates. Several examples showed how closely intertwined water, energy and food security can be: from the solar pump that has enabled Ras Baalbek, Lebanon, to extract more groundwater, to the oil and water subsidies that make costly desalinated water cheaper for Saudi consumers than a typical mobile-phone bill. The good news, several speakers said, is that policy-makers in the MENA region are increasingly aware of the need for change, and there is a growing body of research and data to support cross-sectoral collaborations. The goal now, the session organizers said, is to build critical mass by linking scientists and policy-makers across the region on an ongoing basis to share insights and experiences. All presenters of a session on Earth

Observations, Monitoring and Modelling for Sustainable Implementation of the Nexus Approach clearly stressed the need for an integrated (water-energy-food nexus) research approach as well as the need to train future scientists in Nexus thinking. Speakers called for enhancing the connection between the water-energy-food nexus and Earth Observations.

A session on sustainability as a hidden dimension of the nexus highlighted two key themes at the conference: the importance of ecosystems in nexus analyses, and the role of stakeholder engagement in ensuring that studies and resulting policy recommendations are seen as relevant and realistic on the ground. Dr. Eline Boelee, whose presentation focused on the United Nations Environment Programme approach to the nexus, said UNEP has prioritized ecosystem services and the value they provide, clearly linking human and natural systems. Louise Karlberg, of the Stockholm Environment Institute, meanwhile, stressed the need to embed nexus studies in existing policy and planning processes. She described ongoing work in the Blue Nile/Lake Tana region of Ethiopia that is using integrated water and energy models (WEAP and LEAP) and participatory scenario-building to examine the implications of the country's ambitious energy and agricultural development plans, which has revealed potential problems such as reduced hydropower production if irrigation plans are implemented. Some of the liveliest discussions of the day



occurred at the afternoon plenary, on the science-policy link. Noting the many discussions about governance of nexus issues, Fritz Holzwarth, former Deputy Director-General of the German Federal Ministry for the Environment, said scientists should avoid trying to invent new governance structures, but rather work with existing institutions. Similarly, Torkil Jønych Clausen, chair of the Scientific Programme for Stockholm World Water Week, said the nexus should not eclipse Integrated Water Resources Management (IWRM), which has been adopted by numerous governments. “They’re two sides of the same coin,” Clausen said; the value of the nexus is to draw links to other issues.

Asked about nexus concerns with biofuels, Geraldo Martha, of Embrapa, the Brazilian Agricultural Research Corporation, argued that productivity gains could allow Brazil to greatly expand biofuel production without imperiling food production or expanding the agricultural front. Dinesh Kumar, director of the Institute for Resource Analysis and Policy, spoke more critically of his own country, India; groundwater overuse is underreported in government statistics, he said, and electricity price subsidies are encouraging excessive pumping. Many argue that farmers can’t afford higher prices, he added, but in reality, where they have been raised, farmers have also increased the efficiency of their water use, and its economic productivity.

The second part of the International Conference on the Sustainability of the Water-Energy-Food Nexus meeting on 19/20 May 2014 in Bonn combined three plenary and a number of parallel sessions. Overall, participants agreed that solutions-based approaches to water, energy, and food need to bring together different stakeholders and their interests. This can be done by clearly

identifying the benefits which can be gained through a water, energy, and food nexus perspective, and by facilitating coordination mechanisms. The water-energy-food nexus is not ‘reinventing the wheel’, but rather building upon the wisdom and lessons learnt from existing mechanisms including those in capacity development and integrated resource management.

A session on Institutional Capacity Development for Advancing the Nexus Approach, chaired by Jens Liebe from the UN Water-DPC agreed that there’s a need to identify capacity gaps and their relevant capacity fixes. Gaps are not limited to capacity; there are also policy gaps, knowledge gaps; technology gaps and a lack of engagement with the private sector. Zafar Adeel (UNU-INWEH) pointed out that capacity development needs recognition and differentiation between individual and organizational capacity needs.



The session towards UN-coordinated support to the implementation of the nexus was chaired by Dr. Thomas Chiramba (UNEP). Jean-Marc Faurès from FAO and Annuka Lipponen from UNECE presented their organization’s approaches. The need for integrating the nexus approach into the narrative of the Sustainable Development Goals (SDGs) was broadly agreed upon. UN-WATER’s example was cited as having put an exemplary achievement on the table by uniting its members from the UN system, as well as its international partners to develop one shared global water goal for the Post-2015 Development Agenda.

It was recommended that once all elements of the nexus were individually represented in the Sustainable Development Goals, the inter-linkages should also be addressed, and the targets closely monitored. The perception of the water-energy-food nexus in the media was also briefly discussed: date, the media, and thus the wider public, are not sufficiently aware of the nexus debate. It was recommended for the nexus community to jointly address this challenge, determine what should be communicated about the nexus and how to possibly get the message into the media.

Paul Lucas from the Netherlands Environment Assessment presented an Integrated Model to Assess the Global Environment (IMAGE). The model has been developed to show three different pathways that could achieve the targets of the Sustainable Development Goals, such as global technology (e.g. intensive agriculture, high level international coordination such as trade liberalization), decentralized solutions (e.g. local energy and agricultural production for food security) and consumption changes (e.g. less energy intensive life style such as less meat intake). The model showed that, all three pathways could significantly contribute to achieving the Sustainable Development Goals. Andreas Neef from the Development Studies School of Social Sciences, Faculty of Arts

University of Auckland, New Zealand presented on “Resource Grabbing in the Food, Water and Energy Nexus: Discourses, Practices and Impacts” in context of Tanzania and Cambodia. In the case of Tanzania, the presenter concluded that increasing the planting of second-generation biofuel is leading towards ‘Carbon Imperialism’ which includes a threat to local livelihoods, land grabbing, destruction of biodiversity and water scarcity. In the case of Cambodia, the impacts of biofuel are even more severe not only in terms of severe compromise of food production but also impacts on livelihoods, destroys traditional forest, leads to lack of access to resources such as pastures, constraints on transportation routes and water flows, increases poverty and inequality and impacts on the environment, climate change and ecosystem resources. The present political system is encouraging bio-fuel production by foreign and local investors by providing different forms of land concessions without free, prior and informed consent of local communities.

Eloise Biggs of Southampton University UK presented a framework for Environmental Livelihood Security: sustainable livelihoods and the environment nexus. She connected the water-energy-food nexus with a sustainable livelihood approach (SLA). The overarching purpose of the framework is to fill the research gaps between the nexus approach with the sustainable livelihood approach for improving human security in locations where environment-livelihood interactions are strong, especially locations under threat from socio-environmental pressures. She applied the framework to the Asian Pacific, where it linked water supply, food and water security issues with human, social, physical, natural and financial capitals.

Call to Action for Implementing the Nexus

The Conference concluded with a Ministerial Panel and a Call to Action for policy makers, practitioners and researchers around the world to start developing and implementing strategies that jointly address water, energy, and food in a comprehensive nexus approach. The key messages of the Call to Action are:

1. Responsible governance of natural resources is the necessary first step for action on the Water-Energy-Food Nexus
2. The nexus is calling for a broad involvement of stakeholders to collaboratively work toward sustainable development
3. It is essential to greatly expand financial, institutional, technical and intellectual resources for nexus research and applications

It includes a set of guidelines which aim to support policy makers, practitioners and researchers as they consider a Nexus approach which focuses on increasing resource use efficiencies, which in turn reduce environmental pressures and maximize the benefits from scarce resources.

Read more online!

The discussion extended passed the conference venue and was taken up on twitter

#WEFNexusConference

<https://twitter.com/hashtag/WEFNexusConference?src=hash>



<http://wef-conference.gwsp.org>

Imprint

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RESEARCH PROGRAM ON
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